APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,375	01/14/2002	Jukka Nurminen	796.425USW1	5505

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EXAMINER
PEREZ, ANGELICA

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/047,375	NURMINEN ET AL.
	Examiner	Art Unit
	Angelica M. Perez	2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2.   Claims 1-3, 7-12, 15-19 and 22 are rejected under 35 U.S.C. 102(e) as being

anticipated by Sabat (Sabat, Jr. e al.; US Pub. No.: 2001/0,036,163 A1).

Regarding claim 1, Sabat teaches of an arrangement for forming a

communications network (paragraph 0031; e.g., "develop new networks") where the

arrangement comprises several modules which transfer relevant information between

each other (paragraph 0013 and 0073; e.g., "slice modules" and "system configurations

are modular", respectively), each module handling the forming of a part of the network

to be formed (paragraph 0016; e.g., "first and/or second base station" being part of the

network), a set of the modules (paragraph 0012; where a combined number of modules

makes a set), selected for forming the communications network (figure 1), handling together the forming of the communications network (paragraph 0012).

Regarding claim 2, Sabat teaches all the limitations of claim 1. In addition, Sabat teaches where the set of the modules is arranged from the bottom module, which forms a physical topology of the network (paragraphs 0031, 0032 and 0033; e.g., "optical fiber"), to the top module, which forms logical connections of the network (paragraph 0033 and paragraph 0034, lines 7-8), so that the modules between the bottom and top module form either physical topologies of the network based on specific technologies, or logical connections of the network based on the specific technologies, each module offering resources for the module above, and each module using resources from the module below (paragraph 0032, lines 7-8; e.g., " high-speed datalinks").

Regarding claim 3, Sabat teaches all the limitations of claim 2. Sabat further teaches where the distinct bottom module forms physical nodes (paragraph 0067; where a multiplexer can function as a node), conduits (paragraph 0067; where fiber optics requires conduits for protection when it is installed), and conduit branches (paragraph 0067; where it is inherent to have conduit branches in a physical topology), the conduits containing a number of fibers, wires, or radio links (paragraph 0067, lines 9-12; e.g., "RF band transportation", "physical fiber" and "other traffic"), the physical topology containing line-of-sights information concerning the radio links (paragraph 0068; e.g., "RF protocol limits" provide line-of sight information).

Regarding claim 7, Sabat teaches all the limitations of claim 2. Sabat further teaches where between the bottom and top modules there is the module which forms logical virtual container connections of the network (paragraph 0014, where "SONET" utilizes "virtual container connections").

Regarding claim 8, Sabat teaches all the limitations of claim 2. Sabat further teaches where between the bottom and top modules there is the module which forms a physical network topology by selecting the equipment used (page 8, claim 38).

Regarding claim 9, Sabat teaches all the limitations of claim 2. Sabat further teaches where between the bottom and top modules there is the module which forms a detailed physical network topology in the equipment level by selecting the connections inside equipment, and between equipment (0014).

Regarding claim 10, Sabat teaches all the limitations of claim 9. Sabat further teaches where the module creates the detailed topology automatically (paragraph 0068; where the configuration is done automatically).

Regarding claim 11, Sabat teaches all the limitations of claim 2. Sabat further teaches where the distinct top module forms logical topology of the broadband   ·

connections, and capacities of the broadband connections (paragraph 0050, lines 1-8; where "CDMA" supports broadband communications).

Regarding claim 12, Sabat teaches all the limitations of claim 2. Sabat further teaches where the distinct top module forms logical topology of the signaling connections, and capacities of the signaling connections (paragraph 0050, lines 1-8;"distinct top module" e.g., TDMA, CDMA, GSM, PEN).

Regarding claim 15, Sabat teaches all the limitations of claim 2. Sabat further

teaches where the distinct top module forms logical topology of the connections of the

3G network, and capacities of the 3G network connections (paragraph 0050, line 4).

Regarding claim 16, Sabat teaches all the limitations of claim 2. Sabat further

teaches where the distinct top module forms logical connections between logical

connections of different technologies used (paragraph 0031 and 0050).

Regarding claim 17, Sabat teaches all the limitations of claim 2. Sabat further

teaches where between the bottom and top module there is the module which forms a

physical network topology of lightpaths selecting the equipment used (paragraph 0068).

Regarding claim 18, Sabat teaches all the limitations of claim 2. Sabat further

teaches where between the bottom and top module there is the module which forms the

physical network topology of an optical network by selecting the optical cross

connection and WDM equipment used (paragraph 0015; e.g., "DWDM").

Regarding claim 19, Sabat teaches all the limitations of claim 2. Sabat further

teaches where between the bottom and top module there is the module which forms an

IP network topology (paragraph 0015).

Regarding claim 22, Sabat teaches a method for forming a communications

network, where the method comprises the steps of: establishing parts of tasks, each

part containing a specific technology area to form logical connections of the network, or

to form a physical topology of the network, arranging automatically the parts from the

bottom part, which forms a physical topology of the network (paragraphs 0031, 0032

and 0033; e.g., "optical fiber"), to the top part, which forms logical connections of the

network, so that the parts between the bottom and top part form either physical

topologies of the network based on specific technologies (page 8, claim 38), or logical

connections of the network based on specific technologies (paragraph 0033 and

paragraph 0034, lines 7-8), creating topologies and connections in each part, routing

connections of each part separately to the part below, from bottom to top, so that the

first part above the bottom part is routed to the bottom part, the second part above the

bottom part is routed to the first part above the bottom part, and so on until the top part

is routed to the part below (paragraph 0068; e.g., "ring topology").

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 4, 13, 20 and 21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sabat in view of US Patent No.: 6,625,153 B1).

Regarding claim 4, Sabat teaches all the limitations of claim 2. Sabat further

teaches where the distinct top module forms MSC (figure 1, where "bearer traffic to

mobile switch" acknowledges the inherent existence of a "MSC") and capacities of the

logical connections (paragraph 0012; shows how the connections of the system work,

"logical connection").

Sabat does not teach of MSC clusters.

In related art concerning a distributed cellular communication system architecture for the co-existence of multiple technologies, Liu teaches of MSC clusters (column 8, lines 63-67).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Sabat's formation of a network with Liu's MSC clusters in order to be able to include a greater number of different technologies in the network.

Regarding claim 13, Sabat teaches all the limitations of claim 2. Liu further teaches where the distinct top module forms logical topology of the PSTN connections, and capacities of the PSTN connections (column 4, lines 2-7).

Regarding claim 20, Sabat teaches all the limitations of claim 2. Liu further teaches where between the bottom and top module there is the module which forms an ATM network topology by creating virtual circuit connections, virtual path connections, and links between adjacent ATM equipment (column 7, lines 40-45).

Regarding claim 21, Sabat teaches all the limitations of claim 2. Liu further teaches where connections of each module are routed separately to the module below, from bottom to top, so that the first module above the bottom module is routed to the bottom module, the second module above the bottom module is routed to the first module above the bottom module, and so on until the top module is routed to the module below (column 4, lines 15-20).

5.   Claims 5, 6 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Sabat in view of (MPEP 2144.03).

Regarding claim 5, Sabat teaches all the limitations of claim 2.

Sabat does not teach where the network is characterized in that between the

bottom and top modules there is the module which forms logical 2 Mbit/s connection of

the network.

However, Examiner takes "Official Notice" the fact that the use of 2 Mbit/s

connections for connecting between bottom and top modules within a network is well

known in the art.

It would have been obvious to a one of ordinary skill in the art at the time the

invention was made to use 2 Mbit/s connections in order to connect the topand the

bottom modules in a communications network.

Regarding claim 23, Sabat teaches all the limitations of claim 19. Sabat further

teaches where the part which automatically forms a detailed physical cellular network

topology in the equipment level by selecting the connections inside equipment, and

between equipment comprises the steps of: forming chains or loops of 2 Mbit/s logical

paths, which paths contain one or more 2 Mbit/s frames, from a BSC, clockwise from

the view of the BSC, labeling the 2 Mbit/s logical paths clockwise from the view of the

BSC, starting from the first frame and ending at the last frame, connecting first 2 Mbit/s

logical path into transceivers, and bypassing the other 2 Mbit/s logical paths in the first

BTS clockwise from the view of the BSC, connecting second 2 Mbit/s logical path into

transceivers, and bypassing the other 2 Mbit/s logical paths in the second BTS

clockwise from the view of the BSC, and so on until connecting the last 2 Mbit/s logical

path into transceivers, and bypassing the other 2 Mbit/s logical paths in the last BTS

clockwise from the view of the BSC (paragraph 0068, lines 1-2; where the description of

the applicnt fits the description of a "star topology" configuration).

Sabat does not teach where the network is characterized in that between the

bottom and top modules there is the module which forms logical 2 Mbit/s connection of

the network.

However, Examiner takes "Official Notice" the fact that the use of 2 Mbit/s

connections for connecting between bottom and top modules within a network is well

known in the art.

It would have been obvious to a one of ordinary skill in the art at the time the

invention was made to use 2 Mbit/s connections in order to connect the topand the

bottom modules in a communications network.

Regarding claim 6, Sabat teaches all the limitations of claim 5. Sabat further

teaches where the module further forms 2 Mbit/s frame allocation for exchange

terminals in a specific BSC (paragraph 0050; where a GSM system inherently

comprises in its architecture BSC that perform most of the control among BS), and

selects bit templates for each allocation (paragraph 0042; where bit templates are

allocated according to the type of technology used).

6.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sabat in view of Saintot (Saintot, Patrice; US Patent No.: 6,160,823 A).

Regarding claim 14, Sabat teaches all the limitations of claim 2.

Sabat does not specifically teach where the distinct top module forms logical topology of the TETRA connections, and capacities of the TETRA connections.

In related art concerning a transmission system, Saintot teaches of TETRA connections (table found at the bottom of column 3; column 1, row 3).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Sabat's formation of a network with Saintot's TETRA connections in order to increase the versatility of the network by adding the trunked system capabilities of TETRA standards.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Angelica Perez whose telephone number is 703-

305-8724. The examiner can normally be reached on 7:15 a.m. - 3:55 p.m., Monday -

Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for

the organization where this application or proceeding is assigned are 703-872-9314 for

regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the TC 2600's customer service number is 703-306-

0377.

Angelica Perez
(Examiner)

NAY MAUNG
SUPERVISORY PATENT EXAMINER

Art Unit 2684

June 21, 2004